

ENZYM ELECTRODE

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Abstract of JP55010581

PURPOSE: To secure a quick and simple measurement of the substrate density as well as to realize the continuous and repetitive use of the enzyme electrode by using the graphite for the electron conducting material and thus giving the electrochemical activity to the substrate which suffers the peculiar catalyst function of the enzyme. **CONSTITUTION:** The powder of the high-purity graphite of over 99.5 wt% of fixed carbon and under 0.005 wt% of ash content is mixed with the insoluble redox compound such as the chloranil conjugating the oxidoreductase to be then press-formed. Then the oxidoreductase like glucose oxidase is fixed on the moldings obtained via, for example, glutaric aldehyde. Such enzyme electrode 7 is mounted to electrode support 6 and then soaked into phosphoric acid buffer solution 8 containing pH5.6 glucose (which is the substrate) along with reference electrode 3. The opposite electrode 5 is connected to potentiostat 2 via electrode 7, reference electrode 3 and salt bridge 4 each, and the change of the oxide current is recorded on recorder 1.

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